

Rediscovery of *Buchanania barberi* Gamble (Anacardiaceae), an endangered and endemic species from the Western Ghats of Kerala, India

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Abstract

Buchanania barberi Gamble, an endangered species of the Western Ghats, is rediscovered from Kerala, India after a lapse of 97 years of its first collection. A detailed description, illustration and relevant notes are provided based on fresh specimens.

INTRODUCTION

The genus *Buchanania* Spreng., belonging to the tribe Anacardeae of the family Anacardiaceae and comprising about 25 species, is distributed from Indo-Malesia to tropical Australia (Mabberley, 1987). Out of the 6 species reported from India (Santapau & Henry, 1972), 4 species were so far recorded for Kerala.

Buchanania barberi was described by J.S. Gamble in 1916, based on a single specimen collected by C.A. Barber in 1904 from 'Nadarai', in the present Thiruvananthapuram district of Kerala State. Since then it has not been collected either from its type locality or from its adjacent areas in spite of the best efforts put forward by the subsequent flora workers (Mohan, 1987; Mohan & Henry, 1994; Anilkumar, 1993). Consequently, many authors (Henry *et al.*, 1978; Vajravelu & Daniel, 1983; Vajravelu, 1990) considered it as one among the endangered species of the Southern India.

During the floristic exploration of the Palode reserve forests, the authors collected an interesting specimen of *Buchanania*. On critical studies with relevant literature and type specimen at MH, it was identified as *Buchanania barberi* Gamble, an endangered species known only by the type collection. The present collection, after a lapse of 97 years of its first collection is of botanical significance in conservation point of view. As the original description based on a single collection is rather scanty and inadequate, a detailed description and illustration of the species based on fresh specimens are provided here. All the specimens are

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deposited in the herbarium of the Tropical Botanic Garden and Research Institute (TBGT) for future reference.

Buchanania barberi Gamble, Bull. Misc. Inform. 135. 1916 & Fl. Pacs. Madras 259. 1918; Henry, *et al.*, J. Bombay Nat. Hist. Soc. 75: 687. 1978; Vajravelu in Jain & Sastry, Plant Conservation Bull. 4: 23. 1983; Vajravelu & Daniel in Jain & Sastry, Mat. Cat. Threat. Pl. India 15. 1983; Vajravelu in Nayar & Sastry, Red Data Book Indian Plants 2: 10. 1988; Mohanan & Henry, Fl. Thiruvananthapuram 127.1994. (Fig. 1)

Trees up to 15 m tall; bark smooth or slightly fissured, blaze flesh coloured. Leaves simple, alternate, crowded at apex, 11-14 x 3-4.5 cm, elliptic-oblong, obtuse at base, obtuse or shortly acuminate at apex, glabrous above and rusty villous beneath when young, villous along the nerves at maturity, coriaceous; lateral nerves 16-20 pairs, sub-horizontal, straight and parallel; petiole 2-2.5 cm long, sub-terete, rusty villous. Inflorescence terminal, panicle branched, pubescent, 3-12 cm long. Flowers creamy-white, to 5 mm across; pedicel to 2.5 mm long, puberulent; bracts ovate-acute, to 0.3 mm long puberulent; bracteoles similar to bracts. Calyx lobes 5, creamy-white; lobes triangular, to 0.8 mm long, outer surface pubescent, inner surface glabrous. Petals 4-5, creamy-white, oblong, to 2.5 x 0.8 mm, rounded at apex, reflexed, glabrous. Stamens 8-10, 2-seriate; filaments 1-3 mm long, glabrous; anthers triangular-ovate, to 0.8 mm long, obtuse at apex, pale brown, dehiscing laterally. Disc cupular, 10-ridged, pilose. Carpels 4-6, free, immersed in the disc, ellipsoid, one carpel developed, others suppressed; ovary pilose; ovule 1-per cell, pendulous; style lateral, short; stigma obtuse or truncate. Drupes to 1.5 cm across, subglobose, slightly compressed laterally, glabrous. Seeds ovoid, curved inward at one end, to 1.3 x 1 cm; endosperm copious.

Flowering & Fruiting: October-January.

Distribution: Endemic to Kerala State.

Specimens examined: INDIA, **Kerala:** Thiruvananthapuram Dist., Nadarai, 1 Nov. 1904, Barber 6737 (MH); Nedumangadu Taluk, Palode, 100 m, 23 Nov. 2001, Santhosh Kumar 39356 Fls. (TBGT); *Ibid.*, 5 Dec. 2001, Sabu 44001 Fls. (TBGT); *Ibid.*, Sabu 44002 Frts. (TBGT).

Notes: C.A. Barber collected this species from 'Nadarai', near Varkala in the present Thiruvananthapuram district of Kerala State. Presently, due to the developmental activities, the remaining coastal vegetation had been cleared and this may be the obvious reason for local extermination of this rare species from its type locality, 'Nadarai', as presently known. J.S. Gamble (l.c.) did not describe the mature fruits of *B. barberi*. According to him "*fructus maturus adhuc ignotus*" which means 'mature fruits still unknown'. Hence, the present description of the fruits is an additional information to science on this little known species. Only 4 mature trees were observed on the banks of Vamanapuram river near Palode. All the 4 individuals are along the cut walls of Trivandrum-Shenkottach road and any expansion of the road in the near future may lead to the loss of the species once for ever in the

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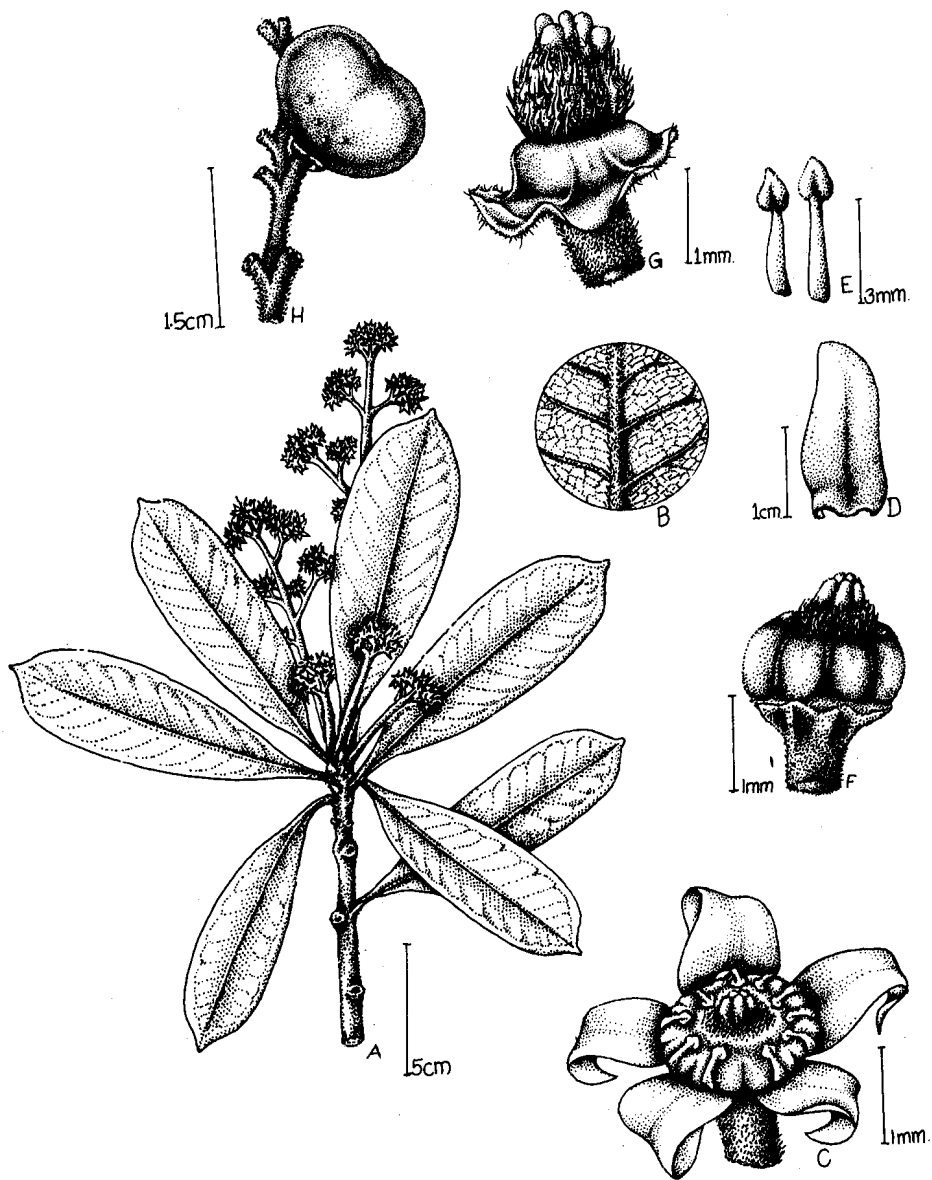


Fig.1. *Buchanania barberi* Gamble: A. Habit; B. A portion of the lower surface of leaf showing rufous pubescence; C. Flower; D. Petal; E. Stamens; F. Pistil showing disc; G. Pistil; H. A fruit.

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wild. The present collection from the base of the Southern Western Ghats, which is quite away from the coastal area forms additional information about its distribution and has academic significance.

This species has been introduced in the field gene bank at the Tropical Botanic Garden and Research Institute as part of species recovery programme.

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